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A Study of the Birds of Santiago Canyon.

MOLLIE BRYAN, ORANGE, CALIFORNIA.

IN A NOOK in Santiago Canyon, where foothills and mountains meet, nestling among the live oak trees is a little home, the ranch of Mr. J. E. Pleasants, where two bird lovers dwell, and where other bird lovers delight to come. Here may be found many of the birds of both mountain and plain.

In days past the Bald Eagle was a common visitant, and the California Condor was almost as plentiful as the Turkey Vulture is now. Many eagles have been killed by those who kept goats, but why the condor has departed, no one can tell. None have been seen here for twelve years or more.

It has never been my good fortune to see as many birds in one spot as can be found in this grove of trees, for here food and water are kept out for them, and protection afforded from all ordinary means of harm. In this 'bird's paradise' all life is spent beneath the trees. It is a luxury to lounge on couches or in hammocks and study the birds as they are enticed within the garden and grove. It is here that for more than two years the most of my study of the habits of birds has been made.

At this point we are over eleven hundred feet above the sea level, and in the shadow of Santiago Peak, the highest point of the Santa Ana range. After a night of refreshing sleep in the pure mountain air, we are awakened by a concert given by the residents of the grove. The Arkansas Kingbird, lark, sparrows, linnets, orioles, and Plain Titmice and the metallic call-note of the California Towhee may be heard. The woodpecker and the bluejay join in. An obligato solo is rendered by the Black-headed Grosbeak from high in a sycamore tree, and the Pasadena Thrasher sends out his song from the top of the sumach bush. The mocking bird at a distance, adds his glorious song to this unrivaled chorus.

One morning there was great excite-

ment under the arbor over the advent of a Violet-green Swallow, who alighted on the fence and remained so long all the household had ample opportunity to observe his beautiful colors and silky plumage. Later in the day, while lazily swinging in the hammock, glasses and note-book by my side, the domestic life of many of these birds has been studied. The linnet and California Towhee are on very intimate terms with my bird friends, and make their homes beneath the roof of the arbor, where our every movement may be seen.

The orioles festoon the vines of the porch with their dainty baskets of palm fiber. Anna's Hummingbird swings his dainty cradle beneath the arbor, the Black Phoebe plasters its mud nest to the frame of the arbor, darting above the table for a fly for his little ones. The California Thrasher, here familiarly called by its pretty Spanish name of "huita-coche" ventured, once only to build it loosely-woven home of coarse sticks within the limits of the grove. The Phainopepla perches on a fence post and with airy crest outlined against the sky, sings its sweetest melody. But we already know that a nest is being built in a sycamore tree close by.

A daily visit to the nests about the place is made. The gentle dove, whose frail nest failed her, readily accepted a strawberry box, wired in place, as a substitute. The Kingbird, Phainopepla's Pewee's, and both the Arizona Hooded and Bullock's Orioles' nests were all objects of interest. As we wander farther away the brilliant colors of the Louisiana Tanager illumine the landscape, though it is only for a time, as he passes on to the higher mountains to nest. The Pasadena Thrasher sits on the top of a small live-oak tree, pouring forth a sweet song and looking so awkward with its long

curved bill. He knows his nest is securely hidden from us. A Spurred Towhee sings his pretense of a song from a fence post, flitting from one perch to another, leading us on and on, till our feet turn naturally to the familiar path that leaps up the side canyon to the tank.

We follow a well-beaten trail through thick-growing bushes of sumach, Yerba Santa, mimulus and wild currant. The sages, as we brush by, fill the air with a delicious fragrance. We pass between beds of violets, nemophilas, purple night-shade and wild heliotrope. The bushes are festooned with the delicate trailing wild pea. Yuccas stand sentinel high on the mountain side. The fuschia-flavored gooseberry is alive with the fairy forms of Allen's and the Rufous Hummingbirds. These bits of irridiscent make you think the lovely scarlet flowers have taken to themselves wings. As the canyon narrows in, the rugged sides project with ledges of rock filled with fossils, only waiting the tap of geologist's hammer. If this narrow gorge is a spot to fill the heart of the botanist or geologist with delight, what must it be to the bird student?

The cry of the bluejay accompanies us as he laughs over our failure to find his nest. The "Jacob, Jacob, Jacob," of the woodpecker is dying away in the distance. The Turkey Vultures soar majestically above us, while a Blue-grey Gnatcatcher flits through the bush at our elbow. From away up the mountain side comes ringing the wild free song of the Wren-Tit, a song as exclusively Californian as is the odor of the sages. It is here, where the overhanging ledges almost meet and the path drops into the rocky bed of the creek, passing from one boulder to another, that I found our Canyon Wren. Its surprise was so great, when it hopped out from a cranny of the rock and saw me, that it paused and looked me full in the face apparently noticing my color markings, as I was studying its own. Then with a harsh 'squeel'

away up the rocky ledge it flitted, and was at once forgetful of the two pairs of glasses following its every movement. Its white throat gleamed in the sunlight as it darted from out a shady crevice and peered into every crack and seam, poking its curved bill among the mosses and lichens for the insects suited to its palate, but always careful to not betray its little home.

From here it was a quick, short climb up the slanting bed-rock of the stream, and we stood at the entrance of a basin, shaped like a great bowl with a triangular piece broken from one side. Between banks of ferns and yellow oxalis, through this crack in the bowl, we enter. The basin is perhaps seventy-five feet across and a tank, built to supply the ranch with water, stands in the center. The walls are of sedimentary rock with alternate layers of sand-stone and pebbles, in tilted strata. They are fringed above with overhanging cotyledons.

The retort-shaped nests of the Cliff Swallow fill the water-worn cavities near the top of the cliff. These were occupied, the chattering birds sailing above, and swooping down to express their disapproval of intruders. The constant supply of water here afforded brings all the birds known in this section. From a natural seat, high above the tank, and partially concealed by the overhanging wall, one may sit for hours and never a moment but rich entertainment is afforded.

The Flicker sounds a loud alarm as his wife comes dancing and bowing down the pipe that leads from the spring above, to take a drink. Although we became statues she heeds her lord's command, and does not venture. Valley Quail peer cautiously over the cliff and seeing us, slip noiselessly down to a pool below for their drink. Linnets, Wren-Tits, Bush-Tits, virecs and numberless others come and go, keeping our eyes and ears on the alert.

(to be continued).